Quality Improvement Program (NSQIP) database. Multivariable logistic regression analysis was performed to identify preoperative factors associated with 30-day mortality and graft failure.

Results: Of the 493 patients who underwent AFB, 89 (18.05%) received a VG and 404 (81.95%) received a PG. Thirty-day mortality rates for patients receiving VG and PG were 2.25% and 6.19%, respectively ($P = .14$) and graft failure rates were 6.74% and 2.97%, respectively ($P = .08$). On multivariate analysis, there was no difference in 30-day mortality (odds ratio (OR) =0.53; 95% confidence interval (CI) =0.11-2.56) or graft failure rate (OR=2.38; 0.77-7.34) for patients receiving VG or PG for AFB. Of the 1219 patients who underwent FFB, 251(20.59%) received a VG and 968 (79.41%) received a PG. Thirty-day mortality rates for patients receiving VG and PG were 1.99% and 1.03%, respectively ($P = .21$) and graft failure rates were 3.98% and 1.65%, respectively ($P = .04$). On multivariate analysis, there was no difference in 30-day mortality (OR=1.45; CI= 0.38-5.59) or graft failure rate (OR=2.19; CI= 0.94-5.08) for patients receiving VG or PG for FFB.

Conclusions: Thirty-day mortality and graft failure rate are independent of the type of conduit used in patients undergoing extra-anatomic arterial bypass.

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PS102.

Comparison between Autologus Saphenous Vein and Heparin-Bonded ePTFE Graft in the Treament of Critical Limb Ischemia: A Trans-Atlantic Experience

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Objectives: To compare early and follow-up results of below-knee bypasses performed with a bioactive heparin-treated ePTFE graft and with autologous saphenous vein (ASV) in patients with critical limb ischemia in a multicentric retrospective registry involving eight Italian and American vascular centres.

Methods: Over a nine year period, ending in 2010, a heparin bonded prosthetic graft (Propaten Gore-Tex®, W.L. Gore & Associates Inc, Flagstaff, AZ) was implanted in 461 patients undergoing below-knee revascularization for critical limb ischemia in seven Italian and one American hospitals (HePTFE group). In the same period of time in these eight centres 376 below-knee bypasses with ipsilateral ASV in patients with critical limb ischemia were performed (ASV group). Early (<30 days) results were analyzed in terms of graft patency, major amputation rates and mortality. Follow-up results were analyzed in terms of primary and secondary graft patency, limb salvage and survival.

Results: Early graft thrombosis occurred in 52 patients (33 in HePTFE group and 19 in ASV group); there were 26 early major amputations (19 in HePTFE group and 7 in ASV group), with 30-day major amputation rates of 3.9% and 1.9%, respectively ($P = .09$). Mean duration of follow-up was 27.1 ± 22.4 months. Primary patency rate at 48 months was significantly better in ASV group (61.8%) than in HePTFE group (38.5%; $P < .001$, log rank 19.1). The rates of secondary patency at 48 months were 51.9% in HePTFE group and 65.9% in ASV group ($P = .02$, log rank 52); the corresponding values in terms of limb salvage and amputation free-survival rates were 74.4% and 78.9% ($P = .3$, log rank 0.9), and 52.9% and 54% ($P = .6$, log rank 0.2), respectively.

Conclusions: Heparin-bonded ePTFE graft provides satisfactory early and mid-term results in patients undergoing surgical treatment of critical limb ischemia. While autologous saphenous vein maintains its superiority in terms of primary and secondary patency, limb salvage rates are comparable.

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PS104.

Hypertensive Extracorporeal Limb Perfusion (HELP)

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Objectives: This article reports the early human results of HELP technology in the prevention of major limb amputation due to ischemia. In short-term aim was to dilate pre-existing collateral channels and the long-term aim was to stimulate remodelling and new collateral development by increasing endothelial shear stress.

Methods: A pilot study consisted of 20 patients with critical limb ischemia. These patients had no other option but major amputation as determined by at least two vascular surgeons. The ischemic limb was isolated from the systemic circulation by the use of an implantable, inflatable,

occlusive cuff. The limbs were hyperperfused through arterial access devices with a pump, producing a nonpulsatile waveform at 200% to 300% of the mean arterial pressure (MAP). This was performed intermittently in sessions of 24 to 36 hours and up to a maximum of 74 hours. The primary end point was avoidance of major amputation. The secondary end points were the clinical improvements in rest pain, ulcer healing, and claudication distance. The objective findings include infrared thermography and ultrasound imaging parameters of the limb.

Results: 39 of 40 connections developed flows 4 to 8 times those supplied to the limb by the normal cardiac output. There was a progressive decrease in peripheral resistance. All patients developed a pain-free, warm foot or hand whilst on the pump in the short-term. In the longterm at a mean of 22 months (12-54 months), eight of 20 patients (40%) had avoided major amputation and four more had a delay in amputation of an average of 4 months. The ankle-brachial index changed from 0.11 ± 0.23 to 0.61 ± 0.38 ($P < .05$). Bleeding, infection, and removal of the access systems and poor patient selection resulted in the failures.

Conclusions: In selected cases major amputation may be avoided by augmenting the collateral circulation of ischemic limbs using an extracorporeal cardiac pump, occluding balloons and with an access system providing intermittent pump connections.

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PS106.

The Society for Vascular Surgery's Objective Performance Goals: A Validation Study of Laser-Assisted Angioplasty: A Safe and Effective Technique for the Management of Critical Limb Ischemia

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Objectives: In 2009 the Society for Vascular Surgery (SVS) developed Objective Performance Goals (OPGs) to assess the safety and efficacy of endovascular treatments of critical limb ischemia (CLI). We evaluated Laser-assisted angioplasty (LAA), using the OPGs

Methods: All patients that underwent LAA to treat CLI between January 2006 and May 2010 were analyzed. The 30 day safety endpoints of Major Adverse Cardiac Event (MACE) (i.e. Postoperative Death (POD), Myocardial Infarction (MI) and Cerebrovascular Accident (CVA), Amputation rate and Major Adverse Limb Event (MALE) rate (i.e. thrombosis, thrombectomy, and bypass) were calculated. The efficacy endpoints were calculated using Kaplan-Meier life table analysis. These included MALE + POD, Amputation Free Survival (AFS), and any Re-intervention or above ankle Amputation and Stenosis /occlusion (RAS) calculated at one year. Subsequently, a comparison with the SVS OPGs was made using the student T test.

Results: : Laser assisted angioplasty was used to treat 82 limbs with CLI. The mean age was 72.8 years, with a mean follow up of 19 months. Tissue loss and gangrene were the most common indications, in 67 (81.2%) of the limbs. Safety endpoints were: mortality rate 2.6%, MACE rate 3.9%, amputation rate 2.4%, and MALE rate of 9.7%. Efficacy endpoints were MALE + POD 84.1%, Amputation Free Survival 84.1%, and RAS 39%.Our study cohort was compared to the SVS OPGs using the Student T test; MACE 3.9% vs. 5.1% ($P = .72$), 30 day amputation rate 2.4% vs. 1.3% ($P = .43$), MALE 9.7% vs. 4.6% ($P = .06$). One year outcomes: MALE+POD 84.1% vs. 76.9% ($P = .14$), AFS 84.1% vs. 76.5% ($P = .14$), RAS 39% vs. 46.5% ($P = .21$). No statistically significant difference was noted.

Conclusions: Our study demonstrates that the OPGs are attainable in clinical practice. Moreover, LAA meets the safety and efficacy OPGs for endovascular treatment of CLI.

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PS108.

Impact of Intra-operative Local Vancomycin on Inguinal Wound Complications

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Objectives: Local vancomycin treatment has been shown to decrease sternal wound complication rates. Whether a similar effect can be achieved at other surgical sites is unknown. This study investigates the effect of local vancomycin on inguinal wound complication rates following vascular procedures.

Methods: Retrospective analysis was performed on 646 patients who underwent open infra-inguinal and hybrid endovascular procedures between 2006 and 2011. Patients received either pre-operative systemic antibiotics alone (Group A) or in conjunction with intra-operative wound application of vancomycin powder and irrigation (Group B). Wound site infection and dehiscence over a 30-day period were recorded. Fisher exact test and multivariate regression analyses were performed.

Results: There were 424 patients in Group A and 222 patients in Group B. Both groups had similar demographics and distribution of vascular procedures. There was no significant difference in the 30-day incidence of superficial and deep wound infections (OR: 0.72, $P = .19$) or dehiscence (OR: 1.2, $P = .46$) between the two groups after